

CLAIMS

What is claimed is:

- 1 1. A method, comprising:
- 2 receiving a logical connection number (LCN) associated with a first logical
3 connection from a connection command;
- 4 using the LCN as a first index to a location in a first memory area to
5 retrieve a second index to a location in a second memory area; and
6 using the second index to access the first logical connection from the
7 location in the second memory area.
- 1 2. The method of claim 1, wherein the location in the first memory area is
2 associated with an availability indicator, the availability indicator being on
3 when the first logical connection is available in the second memory area, the
4 availability being off when the first logical connection is unavailable in the
5 second memory area.
- 1 3. The method of claim 2, wherein when the connection command is an
2 allocate command and the availability indicator is on, the first logical
3 connection is allocated from the location in the second memory area.
- 1 4. The method of claim 3, wherein when the connection command is a
2 deallocate command and the availability indicator is off, the first logical
3 connection is deallocated to the location in the second memory area.

1 5. The method of claim 4, wherein the second memory area comprises an
2 array of available logical connections, each array entry associated with a
3 LCN of an available logical connection, wherein a third index is used to
4 access a second logical connection at a bottom location of the array.

1 6. The method of claim 5, wherein when the first logical connection associated
2 with the connection command is available and when the connection
3 command is the allocate command, the second logical connection accessed
4 by the third index is swapped with the first logical connection accessed by
5 the second index such that the third index is used to access the first logical
6 connection, wherein the first memory area is updated to reflect change in
7 location of the second logical connection.

1 7. The method of claim 6, wherein after the first logical connection is accessed
2 the third index is decremented to allow access to a new bottom location of
3 the array.

1 8. The method of claim 5, wherein when the first logical connection associated
2 with the connection command is unavailable and when the connection
3 command is the deallocate command, the third index is incremented by
4 one to be used to access a new bottom location of the array, wherein the
5 first logical connection from the deallocate command is returned to the
6 array at the new bottom location of the array.

1 9. The method of claim 8, wherein the availability associated with the first
2 logical connection is set to on, and wherein the second index is updated to
3 allow access to the first logical connection.

1 10. A computer readable medium having stored thereon sequences of
2 instructions which are executable by a digital processing system, and
3 which, when executed by the digital processing system, cause the system to
4 perform a method, comprising:

5 receiving a logical connection number (LCN) associated with a first logical
6 connection from a connection command;

7 using the LCN as a first index to a location in a first memory area to
8 retrieve a second index to a location in a second memory area; and

9 using the second index to access the first logical connection from the
10 location in the second memory area.

1 11. The computer readable medium of claim 10, wherein the location in the first
2 memory area is associated with an availability indicator, the availability
3 indicator being on when the first logical connection is available in the
4 second memory area, the availability being off when the first logical
5 connection is unavailable in the second memory area.

1 12. The computer readable medium of claim 11, wherein when the connection
2 command is an allocate command and the availability indicator is on, the
3 first logical connection is allocated from the location in the second memory
4 area.

1 13. The computer readable medium of claim 12, wherein when the connection
2 command is a deallocate command and the availability indicator is off, the
3 first logical connection is deallocated to the location in the second memory
4 area.

1 14. The computer readable medium of claim 13, wherein the second memory
2 area comprises an array of available logical connections, each array entry
3 associated with a LCN of an available logical connection, wherein a third
4 index is used to access a second logical connection at a bottom location of
5 the array.

1 15. The computer readable medium of claim 14, wherein when the first logical
2 connection associated with the connection command is available and when
3 the connection command is the allocate command, the second logical
4 connection accessed by the third index is swapped with the first logical
5 connection accessed by the second index such that the third index is used
6 to access the first logical connection, wherein the first memory area is
7 updated to reflect change in location of the second logical connection.

1 16. The computer readable medium of claim 15, wherein after the first logical
2 connection is accessed the third index is decremented to allow access to a
3 new bottom location of the array.

1 17. The computer readable medium of claim 14, wherein when the first logical
2 connection associated with the connection command is unavailable and
3 when the connection command is the deallocate command, the third index

4 is incremented by one to be used to access a new bottom location of the
5 array, wherein the first logical connection from the deallocate command is
6 returned to the array at the new bottom location of the array.

1 18. The computer readable medium of claim 17, wherein the availability
2 associated with the first logical connection is set to on, and wherein the
3 second index is updated to allow access to the first logical connection.

1 19. A system, comprising:

2 a standby card to receive a connection command from an active card, the
3 connection command associated with a logical connection number
4 (LCN) of a first logical connection, the standby card processing the
5 connection command on the standby card, said processing comprises:
6 using the LCN as a first index to a location in a first memory area to
7 retrieve a second index to a location in a second memory area;
8 and
9 using the second index to access the first logical connection from the
10 location in the second memory area.

1 20. The system of claim 19, wherein the location in the first memory area is
2 associated with an availability indicator, the availability indicator being on
3 when the first logical connection is available in the second memory area, the
4 availability being off when the first logical connection is unavailable in the
5 second memory area.

1 21. The system of claim 20, wherein when the connection command is an

2 allocate command and the availability indicator is on, the first logical
3 connection is allocated from the location in the second memory area.

1 22. The system of claim 21, wherein when the connection command is a
2 deallocate command and the availability indicator is off, the first logical
3 connection is deallocated to the location in the second memory area.

1 23. The system of claim 22, wherein the second memory area comprises an
2 array of available logical connections, each array entry associated with a
3 LCN of an available logical connection, wherein a third index is used to
4 access a second logical connection at a bottom location of the array.

1 24. The system of claim 23, wherein when the first logical connection
2 associated with the connection command is available and when the
3 connection command is the allocate command, the second logical
4 connection accessed by the third index is swapped with the first logical
5 connection accessed by the second index such that the third index is used
6 to access the first logical connection, wherein the first memory area is
7 updated to reflect change in location of the second logical connection.

1 25. The system of claim 24, wherein after the first logical connection is accessed
2 the third index is decremented to allow access to a new bottom location of
3 the array.

1 26. The system of claim 23, wherein when the first logical connection
2 associated with the connection command is unavailable and when the

3 connection command is the deallocate command, the third index is
4 incremented by one to be used to access a new bottom location of the array,
5 wherein the first logical connection from the deallocate command is
6 returned to the array at the new bottom location of the array.

1 27. The system of claim 26, wherein the availability associated with the first
2 logical connection is set to on, and wherein the second index is updated to
3 allow access to the first logical connection.

1 28. A system, comprising:
2 means for receiving a connection command from an active card, the
3 connection command associated with a logical connection number
4 (LCN) of a first logical connection; and
5 means for processing the connection command comprising:
6 means for using the LCN as a first index to a location in a first
7 memory area to retrieve a second index to a location in a second
8 memory area; and
9 means for using the second index to access the first logical connection
10 from the location in the second memory area.

1 29. The system of claim 28, wherein the location in the first memory area is
2 associated with an availability indicator, the availability indicator being on
3 when the first logical connection is available in the second memory area, the
4 availability being off when the first logical connection is unavailable in the
5 second memory area.

1 30. The system of claim 29, wherein when the connection command is an
2 allocate command and the availability indicator is on, the first logical
3 connection is allocated from the location in the second memory area.

1A1 1 31. The system of claim 30, wherein when the connection command is a
2 deallocate command and the availability indicator is off, the first logical
3 connection is deallocated to the location in the second memory area.

1 32. The system of claim 31, wherein the second memory area comprises an
2 array of available logical connections, each array entry associated with a
3 LCN of an available logical connection, wherein a third index is used to
4 access a second logical connection at a bottom location of the array.

1 33. The system of claim 32, wherein when the first logical connection
2 associated with the connection command is available and when the
3 connection command is the allocate command, the second logical
4 connection accessed by the third index is swapped with the first logical
5 connection accessed by the second index such that the third index is used
6 to access the first logical connection, wherein the first memory area is
7 updated to reflect change in location of the second logical connection.

1 34. The system of claim 33, wherein after the first logical connection is accessed
2 the third index is decremented to allow access to a new bottom location of
3 the array.

1 35. The system of claim 32, wherein when the first logical connection

2 associated with the connection command is unavailable and when the
3 connection command is the deallocate command, the third index is
4 incremented by one to be used to access a new bottom location of the array,
5 wherein the first logical connection from the deallocate command is
6 returned to the array at the new bottom location of the array.

1 36. The system of claim 35, wherein the availability associated with the first
2 logical connection is set to on, and wherein the second index is updated to
3 allow access to the first logical connection.

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